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ETTERSBURG STRAWBERRIES

DESCRIBING
VARIETIES AND BREEDING METHODS
AS PRACTICED AT
ETTERSBURG EXPERIMENT PLACE
Ettersburg, Humboldt County, Cal.



BY
ALBERT F. ETTER

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ALBERT F. ETTER



Albert F. Etter

SOME GENERAL REMARKS

About thirty-five years ago I began breeding strawberries and other plants. To be sure, I was then only a boy, but I was more interested in plant life than play. My early efforts were crude, I had no one to teach me, and very little instruction from books on the subject of plant-breeding. I took to the work with an interest and understanding like a duck takes to the water. The study of plant variation became a passion with me, and before I was twenty I had decided to make it my life's work. I had a good vision of the laws that govern plant variation and felt I could get some very remarkable results by following along my theories. I had not what I would call new or radical ideas on the subject, but it did seem to me I had a deeper and more comprehensive understanding than any printed matter I had chanced to read. Ordinarily, this could only prove to be vanity. In my case it has crystallized into something really worthwhile, because there is abundant proof that my principles of plant-breeding do give immediate and ever increasing and valuable variations.

"If a man could only be born when he is old and gradually grow young, the knowledge he would gain could not be known or sung." My happiest thought is that I had the mature judgment as a boy to realize that a whole lifetime devoted to plant-breeding is short at best, and that

an early start gives one a big advantage in final accomplishment. In my earlier years I did not figure that decided success was so easily won as it has proved. Nor did I think there would be so little financial returns when one produced a variety of merit.

The truth of the situation is that experimentation to improve our fruits requires a nature quite opposed to commercial propagation in the nursery business. One cannot follow both lines and do his best. The very situation that compels him to do so, is the weakest link in horticultural practice. For the time being I am devoting my best efforts to producing strawberry plants of the best possible quality.

I selected Ettersburg as an ideal place to do my experimental work, and I find it perfect in its adaptation to produce strawberry plants of the highest excellence. The soil is of a nature that produces a perfect plant, and it is so pliable that every rootlet can be saved when the plant is dug. The plants do not root until the rains come in September. The ground then remains moist and a perfect root system is developed under ideal conditions.

For this season's trade I will have plants from over two acres set last Spring. Because we had a rain as early as the 12th of September, the plants will be numerous and extra good, and anyone who places an order may expect perfect plants. These plants should be well rooted about December 1st.

When I began my work in breeding for new forms of strawberries, the general run of varieties in cultivation were all much alike. Through hybridizing with species not heretofore used, and by selection I have created many new and distinct forms entirely new to the strawberry world. What I have already accomplished is only the beginning of what will be developed by following my system. While it is possible the varieties I have produced

are pre-eminently adapted to the Pacific Coast and Australia and New Zealand—and they seem destined to take the place of the older varieties here—I see no reason why the same system of breeding should not produce varieties of similar form and superior quality for the Eastern and Southern states. Had I preached my system before I had the products to prove my theories, the whole thing would have been scouted as idiotic. Now that we have new types and varieties with red, white, pink and yellow fruit, it seems to work all right. Best of all, from my point of vantage I know there are many new, strange and better forms yet to come.

The climate of Ettersburg is not like the general climate of California, nor is it like the Oregon climate. We are about six miles from the ocean, and have an elevation of 1,000 feet. In winter we have land fogs, but in summer there is no fog, because we have a mountain range three to four thousand feet high directly along the coast. So we have not a general coastal climate. A unique feature of the Ettersburg climate is the clearness of the sky and intense light of Spring and Summer, and the general absence of wind. Almost Alpine skies for light, yet with a lower elevation and the ocean near at hand. The winter rainfall is excessive, having in a single season's precipitation run as high as eleven feet and one inch. This year we had heavy rains in June and on September 12th the new year's rains began. The climate of Ettersburg is just like Heaven, only we have to work. When one knows some of the principles underlying plant development, it is not strange that I should have success in developing new forms of fruit.

My Method of Business

Ettersburg in a business sense suffers, as a friend once expressed it, "from a splendid isolation." Our nearest railroad station is South Fork, fifty miles away. Our most desirable manner of shipping at present is by Parcel Post. This is both cheap and satisfactory and reaches all. I figure on giving every order my closest personal attention. On each and every occasion I may not be able to get on order off with the dispatch of a big nursery concern. I do not dig my plants far ahead and hold them in stock, because it is better to dig the plants immediately before packing an order. Again, weather conditions may make it impractical to dig plants for several days. My aim is to always work in the best interests of my customer, and with rare exceptions I have succeeded in doing so. I pack my plants in a manner to reach their destination in good order, be their destination in the first zone or the Atlantic seaboard.

Terminal inspection is required in California. If you live at a distance from your county seat, this inspection would be more satisfactory if the plants were sent direct to the office of your County Horticultural Commissioner and forwarded to destination from there to the owner. It would save time and postage also. The plants will weigh when packed from four to five pounds per one hundred, and as the reshipping would always be in the first zone, the additional postage is easily figured out.

As regards the sending of money, I am not at all particular. Your check is just as good to me as a money order on the postoffice. I always feel that if I can't trust a man to do what is right, there is no very good reason to expect him to trust me.

If you leave the selection to me as to varieties, my

best judgment is yours for the asking. I am willing to answer questions in my line, as far as my time will permit. But I never could see any fun in working far into the night trying to keep one's desk clear. It would take all the joy out of life. I will always do my best to be courteous and prompt, but there is a limit to service, that's all. When writing, remember the mail service between San Francisco and Ettersburg is two or three days going and coming.



Cultural Methods for Ettersburg Strawberries

Ettersburg varieties are usually considerably more vigorous than the ordinary varieties of Eastern origin. If frosts are not too severe most of my varieties remain green all winter. This is a distinct advantage in California, but not necessarily so in a colder climate. As regards hardiness, these California varieties seem to be able to stand Eastern weather in most places, though they are not as hardy as some of the hardest Eastern varieties. They will probably stand twenty to thirty degrees below zero without serious injury. Because they are deeper rooted and have more leathery foliage they stand considerably more drouth than the general type of strawberries.

Since the plants grow larger, one should figure on giving them a little more room. The ordinary type of strawberry is a failure here. The plants are weak growers, as compared to my varieties, while the hybrid types will almost naturalize themselves. When planting for fruit, I find planting thirty inches each way a convenient distance. Three feet between rows and two feet between plants is also a good distance. The former dis-

tance allows cultivation both ways, while the latter gives more room for picking the berries. Where plants do not grow as vigorously as they do here, they could probably be planted a little closer with advantage. One thing about a successful strawberry bed you must remember is this: Neither high quality of plants or variety alone can insure your success. A strawberry plant is not a soil-builder but diverse. A strawberry plant, if it ever be worth while is going to do a lot more work than the ordinary strawberry plant in Nature usually does. The first few weeks after a strawberry plant is set are the most important ones in the life of the bed. By previous cultivation one should have plant-food available to promote a good growth. By plant-food I don't mean quantities of manure, but real cultivation of the soil, as too much manure is not desirable for strawberries, for the Ettersburg varieties at least. Here we do not irrigate, so where irrigation is practiced conditions will have to be modified somewhat.

The best planting tool I have found yet is one of the "trench tools," such as the boys carried to dig in with. The one I use had been used in the war by some boy, but I pity the boy who had to dig with it in the condition it was when I got it. I spent nearly half a day grinding and polishing it before I could work with it. But when once fixed up it makes an ideal transplanting trowel, or short hoe. The roots are planted straight down, full length, spread out somewhat fan-shaped. After setting the soil is firmed by walking along the row, and tramping with one foot on each side of the plant. This firming is quite essential to success. The ground should be kept in the best of tilth by frequent cultivation so as to maintain good growing conditions. Too much moisture is not good—just enough to main-

tain good healthy growth will insure the best crop the following season.

Some plants have only through their blossoms and seedage the power to propagate themselves. In the strawberry we have an illustration of a vegetative process of propagation in addition to seedage. Indeed, the runners are a modified form of the blossom-truss that produces the fruit. Runner plants, even before rooting, with a truss of blossoms are frequently seen. A much rarer anomaly is a blossom truss in which the primary blossom is absent and its place represented by a runner. Blossoms are devitalizing to a plant, and in the strawberry the runners are also capable of sapping the energy from a plant, leaving it in the same weakened condition as if it had borne a crop of fruit. Such a plant is in no shape to bear a big crop of well developed berries, so if you desire a good crop of berries, don't try to grow a crop of lusty runner plants that have sapped the life out of the parent plant beforehand. The foregoing does not apply so strongly to the ordinary Eastern varieties as to the Ettersburg varieties. For while the Eastern varieties go into dormancy, in their preparation for a cold winter, in late fall, the Ettersburg type are prepared to furnish nourishment up to the first of April, since the runners do not die in the fall, but remain green all winter in a mild climate. The moral is: Don't work your plant to death. Cut the runners off and build up your plant into numerous crowns with plenty of reserve force to produce a big crop of fruit.

In regard to the season of planting, I am not nearly so particular as I am to the condition of the ground when I put the plants in. Early planting is better if one can maintain conditions in the soil to hold moisture through the summer. I get good results with most any kind of plants, but I always use thorough means to plant

right. A plant is right when its roots have not been exposed to the drying air before it is set, and is well firmed into its new location when it is reset. It is always best to remove the blossom truss as soon as it is practical to do so on a newly set strawberry plant. It pays to do so.



About Everbearing Strawberries

I am often asked if Ettersburg Strawberries are everbearing. So much always depends on local climatic conditions that it is hard to say. The moisture conditions in the soil are another big factor. All along the California coast, and probably northward also, the strawberry has a tendency to continuous bearing throughout the summer. This belt may extend back many miles, but still there is the typical coast climate. Here at Ettersburg we are less than six miles from the ocean, and strawberries have but slight tendency to produce all summer. But we have a very modified coast climate. Varieties not of my own origination that produce abundantly on the coast, when grown here never show a blossom after the main crop. Some of my own varieties, such as Trebla, Eurisko and Fendalcino that show a tendency to produce throughout the summer here, bear heavy crops on the coast all through the season. And other varieties—such as Ettersburg Nos. 80, 84, 89 and 121, Ossie and Red Cross that show no tendency to more than a main crop here will bear abundantly on the coast all summer. The progressive seems of little value here as it produces neither a desirable main crop or an all summer crop, and is a poor grower, and the bessies small.

How Etter's Strawberries Differ from Other People's Varieties

Many a visitor on seeing the strawberries at Ettersburg has remarked, "What a wonderful strawberry soil you have; why the plants seem to grow almost wild." Such is the estimate of a man's work offhand. When shown that the ordinary type of varieties make but a poor showing, and further when shown the base material these superior new berries have been made from, then they exclaim, "What a genius you must be to create such changes in plants!" Such is the philosophy of the world. People rarely have learned to think right, and for themselves. I know Etter well, even to his most secret thoughts, and I assure you he is no genius. He is not even a person of superior intelligence in the volume of his knowledge. If I have accomplished something in the world that is worth while, it is because I early in life realized my mental capacity, and in everyday common sense and modesty, set about to do those things that any man who has made his mark in original work can tell you leads to the success of achievement. This "genius" praise is an old gag, and a slam on perseverance and industry that the world knows, and our schools should teach are so essential to success beyond the reach of our fellows. I do not mean that the buds of genius do not exist, or that one may not be born with a predilection for certain lines of work, but I do mean that natural pride of intelligence and an unwillingness to sacrifice natural inclination to duty, and keep everlastingly at it rarely allows it to develop.

Genius is but an inspiration nursed to fructification, and remember the nursing is ninety-eight per cent of the game, because without nursing an inspiration is like a wee bird without a mother—it might as well never have

been born. As a boy, certain things came to pass that made a profound impression on me, and I felt they were worthy of my own precious time to investigate. I say "precious time," because every boy's time is precious, but he doesn't realize it. Before I was twenty, I found I had uncovered enough material to make a life's work. I had uncovered principles in plant-breeding that inspired me to believe I would be able to produce things of the greatest benefit to the world in horticulture. I cared not whether it was approved by others because it was between myself and Nature alone.

So it has come to pass that the Pacific Coast, and some other parts of the world, has a whole new race of strawberries, and all the world has a principle of breeding that should work in producing for their conditions as well as it has produced for our conditions.

A plant once cast off as a seed has now power to learn by experience. Nature when left to herself makes but slight changes. The laws of heredity holds all living Nature in balance. A big tree may fall across a ravine and defy the laws of gravitation and make a bridge. Man may by studied effort take a number of trees and by proper construction build against the laws of gravitation and make a big bridge.

In my work with plants I understand the normal laws of heredity, and build an abnormal structure against the laws of heredity, just as the bridge builder defies the laws of gravitation. I learned the art, and am able to practice it successfully in producing many new and varied types of strawberries and apples. A strawberry bred to an abnormal type is as far as it is abnormal, crazy. It is just like a crazy person. Abnormal strawberries crossed will not produce a normal type, but continue to produce more abnormal types in each succeeding genera-

tion, just as would be the progeny of crazy people inter-married. One thing is certain, the strawberries of the future will be ever so much more varied than they have been in the past, and this must ever remain a living monument to my work.



SPECIES OF WILD STRAWBERRIES

The characteristic difference between the native flora of California and the Eastern States is that the native plants of the East rest in Winter because of the cold, while here in California they have their resting period in the late Summer because of the drought. Our native Wood strawberry has a deep rooting habit, and will stand very droughty conditions late in Summer. At this season it is almost barren of foliage, like unto the Eastern strawberry in Winter. Immediately on the rains coming in Autumn, it springs into active growth and continues to grow all Winter. The fruit matures in April and May here. It is red, globular, often half an inch in diameter, and fragile.

The local form of our Beach strawberry is radically different from the Wood strawberry, (the *Fragaria californica*). This Beach strawberry is found all the way from Alaska to Cape Horn and a thousand miles northward on the eastern coast of South America. Botanically it is known as *F. chiloensis*. They vary greatly as they are found in the various regions along the coast. In this region they are found only along the coastal bluffs and on the sand dunes on the ocean shore. Of all fruit bearing plants they are among the hardiest, being able to fight for existence among rough grasses and weeds, battling against harsh exposure and gales, and

even salt spray from the breakers. The foliage is here of course stunted by privation and trials of frontier life on the ocean shore. It is remarkable nevertheless that seldom or never are they found naturally even as much as two miles from the ocean. Yet when planted in a more favorable environment they luxuriate and do remarkably well. The foliage is dark green and heavy, tough and leathery in texture. The blossoms are large to very large, the male and female blossoms being born on different plants. This peculiar character, however, does not hold in the forms of the species found in other parts. Those from South America being bi-sexual. The foliage of the southern form is also very distinct, being light green and fuzzy. Even such close points as Cape Mendocino and Point Arena have very different forms, while those from Alaska would hardly be recognized. The fruit varies as much as the plants in the different regions. That from Chili and Peru is very large and often irregular in form, born on long trusses and of a light pink or white color. Sometimes the fruit is fairly firm but of open texture. At Point Arena the fruit is born on long trusses, is almost red, soft and fragile. At Cape Mendocino the fruit is pink, born on a very short truss, and is of a solid clingcore type, though soft and fragile. None of the Chiloensis forms are inclined to make plants with numerous crowns, but the plants are very longlived. All except the Alaska form make numerous runners of good dimensions and extraordinary length. In my opinion, the finest textures and most exquisite flavors the strawberry will ever know will be derived from the various forms of the Chiloensis species.

The Alpine strawberry is from Europe, and sometimes is a bush strawberry and in other plants produces runners. Often these runners bear a truss of fruit even before they have rooted. The berries are alike in both

forms and come in the two colors, either dark red or white. It is half an inch long, slender, soft and fragile. The foliage is the tenderest of all the species, and usually rather small and light green in color. The whole plant is characteristically graceful rather than robust. Its strong point in difference is its tendency to produce a multitude of crowns, and to continuous bearing.

The *Cuenefolia* species from Oregon is another odd species. Its strong points are numerous crowns, strong root development and a dogged persistence to rough it and care for itself. The blossoms are male and female born on different plants, and are small and well concealed beneath the foliage. The fruit is pink or light red, small, fragile and rather numerous. While as yet I have used this species relatively little in my work, I am of the opinion it will rank high in giving character to the strawberry of the future. It leaves a deep impress on its progeny in hybrids, and the fruit is not only numerous but promising. Its peculiar bluish foliage is odd among strawberries, and with a dash of the glossy Cape Mendocino Beach strawberry in its make up, it shows some novel and beautiful types of foliage.

Here are some very diverse characters in the strawberry family. Any sort of crossing to mingle the blood of so many characters would produce a motley progeny. But when with studied effort the eccentric individuals are mated, you can guess at, if not realize what it is coming to. Maybe you think you would be crazy before you get all this strawberry lore through your head, but these strawberries are getting crazier than you ever dare get and stay outside of the asylum.

A feature in strawberry breeding which most people do not realize, and in itself a powerful factor in sinking deeper into the game, is that the progeny of neither a simple bi-hybrid or a multo-hybrid, (one composed of

several species), ever revert to the parental species types. A line of seedlings from almost any hybrid variety will show a strong family resemblance. Usually those individuals that really amount to anything are offshoots from the family type, or in other words, freaks. Direct hybrids are many times more likely to bring something desirable than are second generation hybrids.

A remarkable case in second generation hybrids is worth recording: About twelve hundred Trebla seedlings grown from pure Trebla stock as near as field selection could insure run ninety-eight per cent favoring the Trebla family. The Trebla is in itself a very characteristic and unique type, and has great prepotency in the progeny when used as one of the parents in a cross. When you consider that Trebla includes in its parentage the pure species of Wood strawberry, Cape Mendocino Beach and Alpine, and Peruvian Beach, to all purposes a distinct species, and among our cultivated varieties the Sharpless, Parry and Michels' Early, it does seem truly remarkable how they can hold together in a family at all. I might further remark that not one of the second generation Trebla seedlings possessed distinctive merit worthy of further trial.

When one considers that a strawberry can go eccentric, abnormal, or crazy in one of a dozen of its characters, or in a dozen of its characters at once, it puzzles one to know where it will all end up.



ETTERSBURG VARIETIES

The Rose Ettersburg

In 1887 I crossed the Sharpless with the Parry and produced a variety of great size and very coarse

and fiberous. Seed of this produced a berry of the Parry type that grew its fruit on trusses up to fourteen inches high. One of the seedlings of this curiosity made a giant plant with a beautiful large red, shapely berry that was so juicy that when fully ripe would spring a leak and all drain away.

In the early 80's, or earlier still, a Captain Cousins sailing on a lumber schooner to Calao, Peru, brought back to Eureka, Cal., plants of the Peruvian Beach or Sand Strawberry. It was this berry I crossed with the last in the list enumerated above, and one of the seedlings was the Rose Ettersburg. So named on account of its light rose color, and its exquisite fragrance, rivaling the rose in sweetness.

When the Rose Ettersburg began its demonstration of producing enormous crops when the other varieties were all but a failure, the inspiration came to me: Since we have one berry totally unlike the ordinary varieties, why not set about it and create many varieties with wide variation. A fool's dream, maybe you think. I had already done it with dahlias. Why not with strawberries too? It was neither a dream nor a prophecy with my knowledge of the subject. I predicted the coming of the Trebla strawberry several years before it arrived. But it arrived several years before I thought it would.

The Rose Ettersburg has large, open, light green foliage. The runners are long and strong, sometimes eight feet long. It has a deep root system and is tolerably drouth-resisting on that account. Since its mother came from the tropical coast, it is not wonderful that it prefers heat to cold and attains perfection only where heat is present. They will grow in a cool climate but lack flavor and fragrance. The blossoms are large and borne on big trusses. The berries are large and always perfect in form, often five inches in circumference. The color of the

fruit is light pink and the seeds brownish red, the flesh white and not very firm. The flavor is very unlike that of the ordinary strawberry and savors strongly of the Peruvian Beach. Many people like them, while others do not. As a canned berry they are exquisite and delicious, going much to juice and nearly colorless—entirely unlike ordinary strawberries.

It might be remarked that no pink berry could become popular, but in New Zealand, Rose Ettersburg, by some thought to have been Ettersburg No. 80, has become very popular and sold for a fancy price in the market. They have proven valuable in the San Joaquin Valley and in western Oregon I am told they made quite a hit on account of their great producing capacity. Here at Ettersburg they produced at the rate of eight tons per acre without irrigation. The birds bother them less than the red varieties. The blossom is perfect and quite hardy against frost.



The Nor-J

Nor-j is an improved Rose Ettersburg, better in nearly every feature. It is better in foliage, larger fruit and more productive, more color and better texture and firmness, but the blossom is imperfect. Probably would not stand heat as well as Rose Ettersburg and are less fragrant, and also less characteristically Beach strawberry in flavor. Either of these varieties are well worthy of trial, and should be of interest to canners and syrup makers. Nor-j dates from 1913.

Ettersburg No. 80

Ettersburg No. 80 was the first decisive step in improvement after the advent of Rose Ettersburg. Seedlings were grown from Rose Ettersburg, but did not prove promising. Then the Rose Ettersburg was crossed with the native Wood strawberry and produced a red berry, but of little promise. Another cross was made on Rose Ettersburg at the same time with the Cape Mendocino Beach strawberry. This cross produced a wonderful plant that had beautiful foliage and many blossoms, but all, except the primary blossom on the truss in rare instances, were sterile. The mother of E. No. 80 had the odd character of frequently having the primary bud on the truss converted into a runner which developed on into plants in the usual fashion. Ettersburg No. 80 is the result of an open field cross between the Rose Ettersburg X Californica and the Rose Ettersburg X Cape Mendocino Beach strawberry.

The foliage of E. No. 80 is large and broad, dark glossy green and leathery. The later summer foliage is of a bluish cast. The blossoms are large, and the trusses are big and strong. The fruit is a bright red and quite glossy. The flesh is firm, tolerably red and built all in one piece. That is to say: It is a clingcore type of berry and perfectly solid like the Cape Mendocino Beach strawberry. The husk is large and adherent, not parting readily from the fruit as in some others in the solid cling-core type. The fruit is usually globular or slightly broader than long. The later trusses frequently bear obtuse pointed berries that in shape are quite different from the characteristic form of E. No. 80.

There is much about E. No. 80 that leans to the Cape Mendocino Beach ancestry. After it begins to turn to the redness of the proper picking stage of de-

velopment, it is a long time before it reaches the breaking down point of over-ripeness. In making this point, somewhere before I called attention to the relationship between fruit trusses and runners. One is a sexual process of propagation and the other a vegetative process of multiplying. In the Beach strawberry the runners are capable of nourishing the sets a full year if called upon. This same character of long continued nursing is functioned in the trusses in nourishing the fruit. I have seen among certain varieties this process carried out in favorable weather to the degree of converting the berry into a well sugared "fig." Another character the E. No. 80 displays admirably is the ability to resist rain after the fruit is ripening. This is also a character it inherits from the Cape Mendocino Beach strawberry. The flavor of E. No. 80 has a suggestion of the Beach strawberry, but does not have the more pronounced part of it. There is a certain something in the Beach strawberry that is going to give us the most exquisite flavor we shall ever get in a canned strawberry, and in E. No. 80 when canned we are strongly reminded of where it is coming from. Its greatest fault for a canning berry is lack of color to begin with and a color that fades. This is not always objectionable to home canning, but it must be remedied in the commercial pack by resorting to artificial coloring. On account of the solid body of E. No. 80 it is an admirable jam berry. It does not break up in canning and when crushed and made into jam, it does not separate from the juice and shows wonderful substance.

All told, E. No. 80 has proven a variety of wide adaptation and has many friends because its general productiveness and all-around high quality can be relied upon.

Ettersburg No. 84

This variety is a sister to E. No. 80 and leans to the ordinary type in the character of its fruit about as much as E. No. 80 leans to the Beach part of the combination. It is a sturdy and most vigorous grower, and has contributed to some of the best varieties I have originated. The fruit is very red but is not meaty and solid like the preceding variety. It is very juicy and a high class table berry, but not a good canner. It stands drought and heat well and seems to take to cold winters, or regions with cold winters better than E. No. 80. Like E. No. 80, it has a perfect blossom and is productive. The foliage is stiff and leathery, and the root system strong and deep.



Ettersburg No. 89

Ettersburg No. 89 is a cross between the Dornan and the Cape Mendocino Beach strawberry. It is a vigorous grower and makes a wonderful, big, strong plant with numerous crowns and has a great producing capacity. For a half-blood Beach it does not produce many runners. It is extremely robust and will grow in almost any kind of soil, even stiff adobe. All it asks is a chance to get well rooted. The berries are always a true heart shape, and while not of the highest quality, they are good for any purpose fresh or cooked. They are attractive as a market berry, and are a good long distance shipper—a long lived berry. The blossom is perfect, and the color of the fruit red to dark red.

Eurisko

—*Trade Mark*—

Eurisko is a cross between Chesapeake and Ettersburg No. 20, the father of Ettersburg Nos. 80 and 84. It has the strong root development and the type of foliage the E. No. 20, and the Chesapeake type of berry. Deep red to the center and firm enough for a market berry. A splendid berry crushed, preserved or for jam, but not a good canning berry because it goes to pieces in boiling. Has a good body and a very good flavor. Grown on very large trusses and on the coast will bear all season. Not a good type to escape frost on the blossoms. Berries large to very large.



Beaderarena

Trade Mark

Beaderarena is a seedling of the Beach strawberry, gathered by Prof. Jos. Burt Davy, and distributed by the University of California, fertilized by pollen of the Bederwood. In this we have an odd combination of characters of the parents. The foliage, runners and truss are strongly Beach of the Point Arena type. The berries have the rich coloring of the Bederwood and also their size and general outline, but the deep set seeds of the Beach strawberry. The flavor is made up of what is best in the two varieties, being a mild, rich, sweet flavor and unlike that of any other variety. I have seen these berries take on a widened out form and be over two inches broad. It possesses in a notable degree the ability to cure its berries on the vines. The berry is distinctly a table fruit, and not firm enough to ship

to distant market. The berries are held clear of the ground. The blossom is pistilate or imperfect. The rooting habit is not as deep as the Beach strawberry, but they will grow on land too poor to grow most sorts. Beaderarena vies with the Red Cross among visitors for the honor as the best berry to eat from hand in the field. It is beautiful, productive and good. I now have several seedlings of the Beaderarena which hold to the general type, and I feel they will be heard of in the future.



Ossie

Trade Mark

Ossie is a seedling of Ettersburg No. 84—whether it is a second generation or further hybridized is not known. It, too, is an odd combination of characters from the various species it has sprung from. The plant is inclined to rather dwarfish growth as compared to most of the hybrids of my origination. The trusses are large, and the berries extra large. They are most perfect in form, of a light red color. They are firm, solid and extra meaty, of the finest quality for table, a wonderful berry for preserving or jam, and exquisite canned. This is only another instance of superlative quality derived from the Beach strawberry. Though the plants are small in growth, the runners are big and strong and grow long. It has a perfect blossom and is productive and one of the earliest.



Delecto

Trade Mark

Delecto, as the name suggests, is something to charm

the palate. It is a sister of Ossie and is a very large berry also. Instead of being meaty and solid, it is remarkably juicy. One who has never had the pleasure of eating a dish of Delectos smothered in sugar has a treat coming they may well look forward to. A great big red berry that simply collapses in your mouth like a gulp of wine; a delight that must be experienced to be appreciated. It has much of the Beach strawberry in its makeup. Yet even so, and intimate within it, are characters that are radically not Beach. The runners are short, rarely over a foot long and seldom more than two sets on a runner. In appearance, one would hardly suspect it would resist heat and drouth, but in that it has few equals. Indeed, it does not reach its highest quality without considerable heat. Has been reported very successful in the San Joaquin valley. Delecto is one of the latest to blossom and late to ripen. The plants have dark green foliage, are productive, long lived and the blossom is perfect. It is too fragile to stand up for market and is essentially a high class home dessert berry.



— White Sugar

White Sugar is an oddity whose origin is unknown as the label was destroyed by a bird in trying to steal the covered berry. The foliage is strangely different from that of any other variety. The runners are thick and heavy and seldom over a foot long. Sometimes two sets on a runner, but frequently only one. The trusses are very large, and the berries are also extra large, firm and very sweet. The color is white, or in bright weather they may take on a blush tinge. Though more an oddity than a valuable new variety, it is nevertheless a splendid berry. To me it seems most valuable

as the acquisition of a new form that will in all probability be a stepping stone to bringing into the world other new forms that may be most desirable. One of the seedlings I have of White Sugar goes the parent one better by growing but one set to a runner.



— The Cream Strawberry

If a White Sugar strawberry, why not a Cream strawberry to go with it? That's the way they came—together. The old joke about crossing the strawberry and milkweed is too easy. Why use the milkweed at all when one can get cream, sugar and strawberries off the strawberry plants alone. So at last the yellow strawberry has made its appearance. It is as odd among strawberries as the White Sugar, and likely is another stepping stone on the "crazy" road of progress toward better things. The meat of the berry is always as yellow as cream, and the exterior of the berry is also yellow when grown in the shade, or in cloudy weather. If the sun is very bright and warm the berries will take on a slight blush, which will fade if the berries be picked and kept in the shade for a day or two. The Cream strawberry is only of medium size, but is very productive. The flavor is odd and not an improvement on the red sorts, but after all, it isn't in competition with them either. It is a seedling of a variety known as No. 330 crossed by Trebla. No. 330 is a cross between No. 24 and Alpine. No. 24 was a cross between Michel's Early and Rose Ettersburg, and had the peculiar habit of frequently having five instead of the regulation three leaves—just another "crazy" streak, that's all. When you line up the pedigree of the mother's side with that of Trebla, if you believe that men and women with crazy streaks intermar-

rying are likely to beget progeny that are crazy or eccentric, you have got down to the very cornerstone of my system of breeding fruits. Couple this up with climatic conditions that develop the plant to produce the most perfect pollen, and later to grow into the very highest development a fruit can attain, and you have my whole secret, if secret it could be called, and the reason why I am located at Ettersburg. Because Ettersburg has a climate just like Heaven, only just that we have to work.



Ettersburg No. 121

In Ettersburg No. 121 we have an exceedingly interesting type of berry developed from a wholly unlooked for source. It is a plant grown from the seed of a white-fruited Alpine crossed with the pollen from the Cape Mendocino Beach strawberry. If anyone was to come and suggest to you that he could take the flacid little Alpine berry and cross it with such an unpromising wild stock as the strawberry growing on the beach at Cape Mendocino, and produce a berry of the superior excellence of Ettersburg No. 121, you would be likely to think he would arrive at the crazy house long before he accomplished his purpose. E. No. 121 is rated by the highest authorities as the most perfect type of a canning strawberry the world has today. Its uniform size and globular form, brilliant red color, which does not fade when canned, its remarkable high and unique flavor, firmness, solidity and ability to stand any amount of boiling without breaking up, its productiveness and ease with which it may be husked make Ettersburg No. 121 one of the most remarkable berries ever produced. It is the more interesting because it is not even related to the ordinary varieties in general cultivation.

One might imagine that since E. No. 121 is a direct cross between wild species that would in themselves reproduce their identical type, it would be easy to reproduce E. No. 121 by crossing the species it came from. This, however, does not work out that way, nor will E. No. 121 produce progeny that go back to either parental type, but retain their own E. No. 121 family resemblance. Then we have a fine example of the sympathies between runners and blossoms, or vegetative and sexual propagation. As noted before, the Beach strawberry from Cape Mendocino does not produce bisexual, or male and female blossoms on the same plant. In E. No. 121 the blossoms are primarily bisexual, but the terminal blossoms are always purely male, and the female parts only rudimentary developed. If the plant be allowed to nurse a big crop of runner sets, and it will nurse them until the buds for next season's crop are forming, the sympathies of the plant go over to vegetative propagation and the sexual process is weakened. The result is a tendency to produce purely male blossoms. While on the other hand if the plant were not exhausted in nursing sets, there would be abundant reserve energy stored up and a much larger proportion of the blossoms would prove fertile. This theory relating to E. No. 121 is based on my observation that never have I seen a heavy crop of berries follow a big crop of sets nursed through the winter, even though the blossoms were profuse.

E. No. 121 reaches its highest development where the plants do not grow very rank. In such situations I have seen them well up to one inch in diameter, and over 200 ripe berries on a plant all at the same time. Their Beach ancestry gives them a long lived berry. The type of plant is unique, and one would no more mistake it for any other sort than they would mistake a Japanese for a white man. It is a high class berry for any pur-

pose and around Salem, Oregon, is the favorite for quality among the canners. With me it produces but a single crop, but on the coast, in the fog belt, it bears all summer.



Rena

Trade Mark

In the Rena we have a type of Beach strawberry with very beautiful foliage, and an imperfect blossom that always makes a berry. A variety that would bear a berry for every blossom like Rena and product as many blossoms as Ettersburg No. 121, with the high quality of the E. No. 121, would be a treasure indeed. I merely make mention of this here because some day we will have such a berry. Rena is probably an open field cross between the Point Arena Beach and Ettersburg No. 84. The fruit is of fine size and shape, light pink in color with white flesh. The flavor is characteristically that of the Beach strawberry. Besides producing a lot of berries the plants are quite ornamental.



Lnge

Trade Mark

Lnge is a variety of unknown origin. It aggravates the weak places, and improves on the good points of E. No. 121. It has the most perfect canning berry I have yet produced. Almost as solid and firm as a potato, brilliant red that never fades, and will pick without the husk as readily as a blackberry. The plants are as robust as the purebred Beach and it will beyond doubt grow on land too poor to grow much of anything else.

The root system is very much like that of the Beach strawberry, and the plant likely will grow and bear for years if not destroyed by some pest such as the crown borer. Under such conditions it might be a profitable berry. It is very early to ripen and the fruit never comes in contact with the ground. It would be a wonderful shipping berry with a quality unsurpassed. It is the only strawberry I know that will stay all through the juice when canned.



Trebla

Trade Mark

What does Trebla mean? This is a question often asked and easily answered by spelling it backward. But when one sees a berry like Trebla, scarcely related to the ordinary varieties, come through a long series of frosts and a protracted drouth—something the weather bureau presented us with last Spring, and which we had never asked for, and still produced a big crop of berries when all other varieties were up against it, it well might suggest the question, What does Etter mean? The word "etter" means a low, broad, unhewn stone fence surrounding a bit of cultivated land in a fallow region, or literally, a stone wall against inferiority. In substance it means primitive and foundational, and as enduring as time itself. By strange coincidence these are the three outstanding characteristics of my work with strawberries. With primitive species, and in the primitive environs of an almost unoccupied region, I have developed varieties that represent but a small cultivated patch, when one fairly realizes the amount of material that as yet has never been touched.

It is only on rare occasions that a plant like Trebla

comes into the world, and when one watches its performance in the production of berries year after year, and its superb qualities on the march of progress from a plant breeder's point of view, it draws him into a reverie of speculation as to what the strawberry will be a hundred years to come. I don't wish anybody to infer that I think Trebla is going to revolutionize strawberry culture in all the world, for I don't think so at all. Even God himself failed to create plants that will thrive universally, and I am not trying to run opposition with Him.

Trebla is a seedling of Ettersburg No. 114, and the male parent was Ettersburg No. 84. When E. No. 84 first paraded its merits before me I predicted that it would prove the progenitor of some wonderful developments. Its pedigree is given under E. No. 80, and will not be repeated here. E. No. 114 is a seedling of an Alpine crossed with a Rose Ettersburg X Californica. These pedigrees show Trebla to be 25 per cent related to the ordinary type of strawberry and this, on both male and female side, five generations removed.

When I first observed Trebla among 5000 seedlings of many varied crosses, I recorded it in my notebook as "a prodigy of productiveness." It did not seem possible a plant could mature such a crop of fruit. But it did mature them and grew runners and rooted 14 sets. Those 14 sets and the parent plant were set out and produced 450 sets which were not taken up until just before blossoming—all this time having been nursed on the runners, as there is a good deal of the Beach nature in the Trebla. The season was favorable, and these 15 plants produced 45 quarts of husked berries, or at the rate of 25,000 quarts per acre. This was the main crop ripened in a period of six or seven weeks. Had they been irrigated they would have borne more berries later in the season.

Trebla's ability to produce fruit is primarily due to its abnormally branched main trusses, and auxiliary trusses ordinary varieties do not have. I have frequently counted 140 to 150 buds and blossoms on a set which rooted not earlier than November 15th, and made this showing the following Spring. The main truss carried nearly half the blossoms. The auxiliary trusses were developed on the sides of the crown stem and below the main truss. I noticed something similar to this abnormal fruiting power when I was breeding dahlias. It proved such a powerful force in breaking into new forms in the dahlia, that when I saw it appear in the strambery, I hailed it with joy. That hope is stronger today, and if I know strawberries, Trebla is the entering wedge that is going to give us some strange and wonderful new strawberries.

Trebla is a strange and unique form among strawberries. Once known, its peculiar type is recognized on sight anywhere. It is a strangely complex and many sided combination of the various species it is made of. The strongest characters are probably from the Beach, to which it owes its powerful runners and heavy root systems. Also the evergreen type of foliage, where the rigors of winter permit a plant to carry green foliage. The internal structure of the berry is like the Cape Mendocino Beach type—solid, and built all in one piece, like a clingstone peach. The external appearance of the berry is more like the Californica type, but in some respects resembles the Alpine also. From the Alpine also it takes a coloring stain that colors the fingers while picking, and is not easily washed off. Even after the fruit is canned in glass, this color is the natural deep red, and will not fade out if kept in the light for years. The structure of the berry, which resists boiling without going to pieces, its permanent color and general high quality make it an all purpose berry hard to equal. From the

Beach type too, it inherits the ability to resist rain while ripening, and the long life of the berry after the picking stage is reached. The blossom is perfect and most like the Beach type, but every blossom makes a berry. The truss is ordinarily more like the Alpine, and usually is easily removed, but in this respect it is not the equal of E. No. 121 in ease with which it may be husked. I might note here too, that the local conditions under which it is grown greatly modify the ease with which a strawberry may be husked.

Of all the species of strawberries, the little Wood strawberry, the *Fragaria californica*, is nearest like a resurrection plant. I have seen this berry so dry in drouth that when taken up, it would seem if a match were touched to the roots, they would burn. Yet as soon as a rain would come to freshen them, they would quickly spring into life as though but sleeping. Indeed, this is the California sleep—from Summer's drouth instead of from Winter's frost and snow. Trebla inherits this ability to sleep in drouth in a full degree from its California ancestor. In periods of drouth, such as we had here last spring, Trebla had begun to ripen its crop under such stress of drouth that when the crop was half ripened, the berries began to shrivel and the foliage to wither in the heat. A generous rain came and in 24 hours the plants were erect and the berries began to swell out into normal size, and the latter part of the crop was better than the first. These same plants then threw out a fine crop of runners, and are producing berries now, October 1st.

Trebla is a long lived plant, holds its entire crop free of the ground, and produces berries up to one inch in diameter. A characteristic of the variety is a canopy of leaves held above the blossoms. This in a measure protects the blossoms from frost, but does not entirely account for its ability to go through severe frosts without injury. I have seen Trebla weather a frost that took but

five per cent of its crop when E. No. 80 alongside lost nearly fifty per cent of its blossoms. This past season we had a long spell of frosty weather in the blooming season. On three occasions the mercury dropped to 28 degrees or lower. It froze all the orchard fruits except a few apples now and then. Among the strawberries Delecto and Kalicene had about a quarter of a crop, Cream and Red Cross had half a crop, and Trebla probably 80 per cent of a crop—under the drouthy conditions, as much as it could mature—in other words, a satisfactory crop under distressful conditions. The Trebla as it grows here stands about 14 to 16 inches high and 18 inches broad.



Red Cross

Trade Mark

The Red Cross is so named because "it is perfectly at home in the midst of distress among its fellows." In other words, when all other varieties are in distress from heat and drouth, Red Cross goes right along producing the plumpest and sweetest berries ever, just as though all was lovely. There is no impenetrable mystery about it at all. It has the long, straight, deep penetrating roots typical of the Cape Mendocino Beach strawberry, and the foliage strongly resembles the native Wood strawberry. It does not wither in distress, but as the temperature grows warmer, it furls its leaf surface by rolling its leaves. When the heat of the day is passed, the leaves again unfurl and all is as before. Red Cross has the type of roots I long looked for, and when I got this type of roots and the Californica type of foliage, it makes a splendid sort of plant to meet our type of summers.

Red Cross is a seedling of Ettersburg No. 216 X

Trebla. No. 216 is a cross between E. No. 84 X E. No. 70. E No. 70 is a cross between Crescent X E. No. 20, one of the Rose Ettersburg-Cape Mendocino Beach hybrids. The striking feature of Red Cross is the long slender, almost hairlike stems always bowed up and by entangling through the foliage manage to keep the fruit clear of the ground. This feature makes the Red Cross unusually easy to pick and pack. The fruit is a beautiful glossy, bright red and quite firm enough to be a good shipper. In form it is usually globular, the more typically developed specimens being quite flat on the end, like the egg after Columbus made it stand on end. Of all the berries I have yet produced, I regard Red Cross as the finest to eat in the patch, or as a table berry, being unrivaled as a shortcake berry. In the basket it is also particularly neat and showy because of the true and plump form of every berry and the slender stems. The flavor is mild, sweet, rich and delicate, combining some of the finest qualities in both the Beach and Californica species. It is not recommended for canning, as it does not belong to the canning types. It is very productive, and under favorable conditions would likely bear all summer. The plants do not grow quite so large as Trebla, but like it are long lived. The blossom is perfect, and every blossom makes a berry. Like Trebla, it is very free of leaf-spot fungus. This is the first season Red Cross has been placed on the market, but from its record here, wherever any of the other Ettersburg varieties succeed, one need not hesitate to plant it. In season it is among the earliest.



Kalicene

Trade Mark

This is a sister to Red Cross, but more of the Trebla

type. Its most remarkable character is its remarkable solidity and firmness, a quality where it stands unrivaled and alone. It is blood red to the center, spicy and highly flavored. The blossom is perfect, the berry good sized and heart shaped. It is productive, free of disease, belongs to the canning type, and above all else, should be a great long distance shipper.



Ettersburg No. 450

This is another very solid type similar to Kalicene, in most respects. Like Kalicene, it also holds its berries free of the ground, but on erect stems. It is productive and makes a fine large plant, but is more subject to leaf-spot fungus than I would like. However, where this fungus does not bother it might become a good long distance shipping sort.



✓ **Fantastic**

Trade Mark

Fantastic is the well known Fendal crossed with Ettersburg No. 121. It takes its name from the fantastic form its berries often assume. I have seen these berries grow fanshaped and quite three inches broad. On several occasions I have seen them take on the form of a butterfly, all but the legs. Most of the berries are long and slender, almost finger shaped. However strange in shape they may grow, they never have green tips. They are deep red, of high quality and productive. The blossom is perfect and the plant a strong grower and free of leafspot fungus.

Fendalcino

Trade Mark

Fendalcino is a sister to Fantastic. It resembles the Fendal in having an imperfect blossom, and the extra large berry of the type of texture among our best Eastern varieties. It is bright red, of extra fine flavor and tolerably firm. Growing side by side with the famous Banner berry, the berries were very much alike in general appearance, but the Fendalcino was about 40 per cent more productive. It is extra early and should be a high class market berry for nearby markets.. It is not of the canning type, but would be good for crushed strawberries. It has foliage of a lighter green than the typical Beach strawberry, and is quite glossy and heavy. The roots are extra long, and the plant noticeably drouth resisting, very free of disease, and hardy and vigorous. It shows all indications of being an all-summer bearing variety. Fendalcino is resistant to heat, and when it comes to protecting its runners from sunburn from contact with the hot ground, it displays remarkable intelligence. Instead of the runners lying flat on the ground, they bow up free of the ground and only the plants come in contact with the ground—a novel and ingenious idea. It has all the earmarks of a variety that should become a favorite variety for the home garden and as a commercial berry, as the quality for a dessert berry is excellent.



SOME QUESTIONS ANSWERED

Which varieties have perfect blossoms? Rose Ettersburg, Ettersburg Nos. 80, 89, 121, Ossie, Fantastic, Delecto, Trebla, Red Cross, Lnge, Eurisko, White Sugar, Kalicene and E. 450.

Which have imperfect blossoms? Nor-j, Fendalcino, Beaderarena, Cream and Rena.

Which hold their berries free of the ground? Trebla, E. 121, Ossie, Lnge, Rena, Fantastic, Red Cross, Kalicene, Beaderarena, E. Nos. 80 and 84.

Which are the best canning varieties? E. No. 121, Trebla, Lnge, E. No. 450 and Kalicene. For canning may be added E. No. 80, Nor-j and Ossie.

Which are the best shippers? E. Nos. 80, 121, 450, Lnge, Ossie, Kalicene, Trebla and Red Cross.

Are the canning berries good table berries? Yes, a strawberry to be a good canning berry must be a berry of the highest quality, and is a good berry for any purpose.

Which are the best dessert varieties for home use? In the mild, sweet type: Beaderarena, Fendalcino, Nor-j, White Sngar and Red Cross; Moderate acid: Delecto, Eurisko, E. Nos. 80, 84, 89, Ossie and Fantastic. High flavored, Trebla, E. No. 450 and E No. 121. Extra high, Lnge and Kalicene.

Which are the best shortcake berries? Red Cross, Delecto and Fendalcino. As a cake dressing when cooked: E. No. 121, Lnge and Kalicene.

Which are the most delicious as a canned fruit for the sick room? Nor-j, Rose Ettersburg, Ossie and E. No. 80.

Which are the greatest producers? Class 1—Trebla; Class 2—Fendalcino, Red Cross, Nor-j, E No. 89 and E. No. 80; Class 3—Eurisko, Rose Ettersburg, Beaderarena, Ossie, Delecto, Fantastic, E. No. 121 and Kalicene; Class 4—Lnge.

Which are the hardiest in resistance to frost in time of blossom? Trebla (in a class by itself); Class 2—Red Cross, Kalicene, Fendalcino, Cream, Delecto, E. Nos. 89 and 80.

The most susceptible to frost, Rose Ettersburg, Nor-j, E. No. 121, Lnge, Ossie, E. No. 450 and No. 84.

Which are everbearing, i. e., bear all summer? On the coast in the fog belt, Trebla, E. No. 121, Eurisko, and Fendalcino, while Ettersburg Nos. 80, 84 and 89 produce a good many late berries. Away from the coast atmospheric conditions are less favorable and information is too meagre to recommend.

Which varieties stand the heat of the interior valley of California best? Delecto, E. No. 80, E. No. 84, Beaderarena and Rose Ettersburg, and likely Fendalcino and Red Cross, judging by their behavior during our hot spells here, when it gets up to 95 to 98 degrees.

Which would likely succeed best in light sandy land?

No. 121, Lnge, Trebla, Nor-j, Rose Ettersburg, Red Cross, Rena, Beaderarena and Fendalcino.

In heavy clay? E. Nos. 80, 84, 89, Eurisko, Delecto and Ossie.

When is the best time to plant? There is no one best time under all conditions. The first year's crop, i. e., on newly set plants, is promoted by early planting, but your big item to consider is not how many berries you can get the first season, but how good a growth you can get on your plants the first season so as to get a big crop the second season. This inevitably depends on soil conditions you can maintain throughout the summer. To my notion, early planting on weedy land that is inclined to run together multiplies one's work in keeping the bed in order out of all reason to the benefits derived. It is better to get one's ground in perfect condition, and plant after the heavy rains are over, and then make up for lost time by the extra good cultivation one can then afford to give the late set bed. Keep the runners cut and build up the plants into many crowns. They will root deep and be established for business for the life of the bed.

Are plants that have stood over a season, 1 year old sets, good to plant? Generally they are not considered worth while. This verdict is aimed at the Eastern varieties. Much depends also on the sort of land and climatic conditions where the plants are grown. With Ettersburg varieties grown and planted here, I do not find there is any difference worth considering. Not as much in fact as there would be in a little difference in cultivation.

How long does a bed of Ettersburg strawberries last in producing condition? Here the determining factor is the crown borer, a grub that tunnels through and eats up the fleshy crown part of the plants. Ordinarily the beds last from three to five years. The crown borers eat the ordinary varieties up the second season. Trebla, Red Cross, E. No. 121, Fendalcino, Ossie and Beaderarena seem to last the longest.

Why do Ettersburg varieties have greater resistance to the ravages of the crown borer than do the Eastern sorts? Because the crown borer is most active and destructive during the late summer and fall. Not only are the Ettersburg varieties more vigorous, but are able to counteract the injury by fall and winter growth which Eastern varieties do not make. An injured portion of the crown will throw out a whole new root system before next season's work begins, while the Eastern variety has nothing to recuperate.

Are crown borers likely to be introduced on the plants? No chance on new sets, and practically none on one year old sets if inspected properly.

How far can strawberry plants be shipped by mail? During the Winter months they carry nicely to the Atlantic seaboard. In crossing the ocean to either Europe or Australia, it all depends on the position the mailsack the plants are in gets in in the stack of mail on the boat, since a plant must have some air.

How should plants be treated on arrival at their destination? If not ready to plant at once, untie the bunches and spread the roots out fanshaped and heal in the ground so that the soil comes in close contact with all the roots, then water a little. Plants thus treated can be held for a long time early in the season. Later in the season one must use more care, but usually can better gauge the weather conditions so that healing in is not necessary.

Should the buds on a newly set plant be removed? If set out early it does not make much difference with most of my varieties. If set late, I would recommend it. With Trebla it is always advisable until the plant is well set and strong.

Can others breed strawberries as you do? I have no monopoly on it that I know of. If it had been brains alone that was necessary, I would surely have all kinds of rivals. Originality inherited, and cultivated by environment and effort, combined with perseverance on the one hand, and a willingness to serve God by trying to do something for my fellowmen as well as myself, are the mainstays of my success, and I am not trying to monopolize the game at all. If I can't lead with all my years of experience, I ought to be worsted. Therefore, I am willing to help other plant-breeders do for other sections as I have done for this. I have not described everything I have, because it would be useful only to plant-breeders. I take a great interest in my plants away from home, and I am always glad to get letters telling of their behavior. Whether good or bad, it helps me in my work, and it also helps me to advise others on what to plant.

Do strawberries mix if planted together, or vary in character? It is a popular fallacy that when two or more varieties of strawberries are planted together, that they will mix, i. e., change the type of fruit. Generally speaking, any change is impossible. Each variety and all its

runner plants will produce their own particular type of fruit regardless of how many varieties are around about it. In specific instances a favorable cross-pollination of the blossom may produce a superior specimen of fruit, but if the plant be removed to a different place where such favorable polleniation is not possible, the plant will produce its own characteristic fruit. Different climatic



A Trebla plant showing the mass of fruit. This plant was photographed hanging roots up, so as to expose the fruit to better advantage. Ordinarily the fruit is held well free of the ground.

conditions, and even soil conditions will cause a variety to vary greatly. What is still more to the point, different soil, where the climate is absolutely the same, will affect some varieties to a far greater extent than others. Another point where variation occurs to a very marked degree in many varieties, is in the first and second crop berries. As instances I may cite the Trebla berries produced on young plants late in summer. They are quite a different type of berry from what the same plant will bear in the following Spring, being fibrous and soft with an adhering calyx as compared to the solid, meaty Trebla with a calyx easily removed on the main crop. In the Ettersburg No. 80, the latest trusses generally have pointed berries instead of the round type characteristic of the variety, and the fruit is also more fibrous also. I think the rule will hold good that the firmest berries are produced in the cool coast climate, and that these are also the superior canners. Nor is there any question that the warmer parts produce the finest table berries.



TESTIMONIALS REGARDING ETTERSBURG STRAWBERRIES

Some people always want testimony from a source that they feel is uncontaminated with self interest. In the ways of the world in general, I suppose the policy is a good one. But in my line of work I have been weaned away from the practice of soliciting aprobation from my fellow men, or in accepting their estimation of my strawberries as superior to my own. Not that I have the "big head" and running on the dangerous shoals of conceit, but because until someone else has gone into the subject with the years of earnest work, patience and observation I have, it would be folly to accept a more superficial knowledge to my own. Schools may help a young man to short cuts, but ninety per cent of what we get in our schools is knowledge, and ten per cent wisdom. If knowledge is the prerequisite, then any man with a library at his elbow should be able to do with strawberries what I have done. The schools may now teach how I did it, but wisdom alone can carry on the work, as I fondly hope, will some day give us berries of far greater excellence than those we now have, not only for some parts where these varieties are peculiarly adapted, but for all regions. I am only out for commercial trade because I am anxious to carry on this work as rapidly as possible, and somehow one must have the wherewith to live in this world.

If you ask me for information, I will do my best to give you what is correct. If you intrust your order to me for plants, I will do my best to serve your wants with courtesy, and as much dispatch as is actually possible. I don't say I always have pleased, because some people wouldn't be pleased if they had a free ticket to heaven; they would insist on stop-over privileges. I

have little facility to hire "two dollar" men to help bungle up an order in emergencies, and my customer is the better for it because I don't. Sometimes, too, weather conditions hold the work up. A nursery business from the ground to the customer, and that is the only way strawberry plants should be handled; is not like a dry goods store on Main Street, and this must be considered, too.

Prof. A. H. Christiansen, Farm Adviser of Humboldt County, the first Farm Adviser in California, has visited Ettersburg many times and contributes this statement regarding Ettersburg strawberries:



OFFICE OF THE FARM ADVISER,
319 G STREET,
EUREKA, CALIFORNIA.

Eureka, Cal., Dec. 4, 1916.

Albert F. Etter,
Ettersburg, Calif.

My Dear Mr. Etter:

I have been very favorably impressed concerning the new varieties of strawberries grown on your farm at Ettersburg. I do not believe I have ever seen strawberries yield in such profusion as I have seen them yield at your place, and under what would have appeared unfavorable conditions to strawberry culture.

I have also been very much interested in watching the canned product, (Trebla variety) placed on exhibition in my office for the last eighteen months. The remarkable thing about these strawberries is that they are of the same color today as they were when put there. They are also perfectly whole and the texture is unchanged.

Wishing you all success, I remain,

Very sincerely,

A. H. Christiansen,
County Farm Adviser.

Office of the
HORTICULTURAL COMMISSIONER,
EUREKA, CAL.,

Nov. 29, 1916.

Albert F. Etter,
Ettersburg, Calif.

Dear Mr. Etter:

I desire to express my sincere appreciation of the work you are doing at Ettersburg Experiment Place in the line of breeding new strawberries, apples, etc., to enrich the Horticultural world.

Before I visited your place I did not realize the extent of your work. Since then I have taken particular interest, while traveling over the county, in noting the success growers are attaining with your various varieties of hybrid berries.

I often have occasion to see some of your Trebla strawberries canned in glass jars, in the office of the Farm Bureau in Eureka, that have been exposed to the strongest light for the past 18 months, yet today they seem to be as natural and red as the day they were put in the jars, just like the fresh fruit. They certainly look very attractive.

Trusting I may again visit your interesting place in the near future, I am,

John F. Benton,
County Horticultural Commissioner.

BARREN HILL NURSERY,
NEVADA CITY, CAL.

Nevada, City, Cal., Dec. 2, 1916.

Mr. Albert F. Etter,
Ettersburg, Cal.

Dear Sir:

I want to tell you that your hybrid strawberries No. 80 and No. 84 are prizes in every sense of the word. Stronger in growing than any sort I know of, productive in proportion to extremely large size plants. Quality, both for table and canning; Flavor delicious, distinct and *equaled only by the wild berry.*

In short you are "hiding your light under a bushel"
in not putting them under wide distribution.

Yours respectfully,

Barren Hill Nursery,

C. E. Parsons.

Mr. W. F. A. McIntyre of Thermal, Cal., writes
interestingly on Rose Ettersburg strawberries in that
hot region.

CONCHILLA RANCH,

October 8, 1916.

Mr. Albert F. Etter,
Ettersburg, Cal.

Dear Mr. Etter:

I thought perhaps you would like to know how Rose Ettersburg strawberries thrive here on the desert. The variety surely surprised me. It is far and away above all others in resistance to alkali, desert drouth, (which is worse than other kinds of drouth) and hot sun. The plants remained green and unwilted when the ground dried out hard, with a crust of white alkali on top, (my soil is a fine sandy loam) and started vigorous growth when water was again supplied. You will understand better what this means when I tell you that the thermometer ranged at and above 110 degrees in June.

I received these plants from you in April, and because I thought they looked like they were going to die I neglected watering them, intending to abandon them. Later seeing that they would not die, but persisted in trying to grow, I transplanted them again in mid-summer to a spot nearer the ditch. They immediately put forth vigorous foliage and the ten plants now have increased to over 150.

I am, very sincerely yours,

W. F. A. McIntyre.

Mr. B. F. Carlett of Sutter, Cal., writes as follows of Ettersburg No. 80 after growing them for several years:

We find No. 80 the most wonderful strawberry we have ever seen here. The berries measure 3 to 5 inches in circumference, and bear profusely for about a month. As a dessert and canning berry we have never seen its equal; 20 to 30 berries fill a strawberry basket that sells for 15 cents or 1-2 cent each. Wherever this variety succeeds as it does here, it surely will supersede all other varieties.

The following letter shows the results one gets when they put No. 80 on the right kind of soil.

Ukiah, Cal., March 28, 1916.

Mr. Albert F. Etter,
Ettersburg, Cal.

My Dear Sir:

Stumbling or no stumbling, you are surely doing some wonderful things in strawberries, and one of the best features of it is that people can put their faith in what you say and not get stung. I have had a different experience with some other well meaning but too enthusiastic "wizards." I am cultivating about 15 different varieties of strawberries, thorobreds grades and scrubs, and not one of them comes in sight of No. 80 for prolificness nor hardness of plants. In fact No. 80 on moderately poor soil, but with good cultivation and some irrigation, bears so profusely that it must be seen to be believed. If I ever give up No. 80 on this place, it will be because some other of Etter's varieties crowd it into the background.

Wishing you all success, I am,

Yours very truly,

E. R. Taylor.

Mrs. J. A. Ball, of San Jose, writes as follows under date of May 18, 1916:

"I have for the past three summers grown your Ettersburg No. 80 very successfully. My original dozen plants came with a subscription to the Pacific Rural Press. Everyone says they never saw any strawberries to compare with these for productiveness, and the flavor surely is fine."

Panks, Oregon, Dec. 31, 1919.

Mr. A. F. Etter,
Ettersburg, Calif.

Dear Sir:

In March, 1918, we received from you 200 Trebla and a few Eurisko strawberry plants and I am writing this to tell you how successful we were with them. Altho the past two seasons have been very trying ones, we are very much gratified with the results from your plants. During the past ten years we have tried out several varieties, among them the Imp. Oregon which we thought was about the best all round berry obtainable. But now that we know the Trebla, the Oregon will have to "go away back and sit down."

The Trebla is surely an all-in-all wonder in size, shape, color, flavor, firmness, beauty, hardiness and productiveness. We consider it the "best ever." Loud and long were the praises received from all, who had the opportunity of sampling both the Trebla and the Eurisko.

Yours truly,

George Sheppard.

From the Hawaii Agricultural Experiment Station under date of April 10th, 1918, Mr. F. G. Krauss writes as follows:

Dear Mr. Etter:

I thought you would be interested in knowing how your Ettersburg No. 80 strawberry is doing in our trials. In comparison with the much lauded everbearing varieties Americus, Francis, Progressive, etc., and of the old standby, the Brandywine, your E. No. 80 stands at the head of the list with us.

Yours very truly,

F. G. Krauss.

Mendocino, Cal., Feb. 8, 1920.

Mr. A. F. Etter,
Ettersburg, Cal.

Dear Sir:

Your shipment of strawberry plants were duly re-

ceived and I wish to state were the finest appearing plants I have yet seen.

I am much pleased that you used your judgment in filling the order, as I am convinced that in so doing, you worked to my best interest. The plants were set the day after they were received, and are now showing new growth. I shall profit by your advice in regard to their care, and have no doubt they will prove a success.

Thanking you for the interest you have shown, I am,

Yours sincerely,

W. Atwood.

Berkeley, April, 8, 1915.

Mr. Albert F. Etter,

Briceland, Humboldt Co., Cal.

My Dear Mr. Etter:

I thought you might be interested in the experience I have thus far had with your strawberries. In March, 1914, I bought 25 plants of you of each of the following: Ettersburg No. 80, No. 84, and No. 93. At the same time, or, really about two months earlier, I set out six other "standard" varieties, bought from one of the best known strawberry specialists in the country. All did well; but the curious thing about your plants was their marvelous vigor and plant making power; treated the same as the other varieties, they outgrew them two to one, especially the No. 80; also, the fact that they did not blossom at all the first season; the first blossom discovered on any of your three varieties was November 5. Of course it was too late for the berries to ripen, so we have not yet "sampled" them. But, if they did not bloom the first season, they have certainly attempted to make up lost time this spring. I have just attempted to count the blossoms and berries on one average plant of the No. 80. I counted one hundred, and did not cover one-fifth of the plant. I am perfectly confident that there are at least 500 blooms, not buds, and berries on that plant. Another odd thing, in view of what I said about the non-blossoming of the plants last summer, is the fact that young plants, formed from those I got of you, are heavily loaded with blooms and berries now. I just counted one

that I had used to re-plant in another variety, and it has on it, by actual count now, 125 blossoms and berries, not to mention very numerous unopened buds. All the young plants I allowed to grow are just like this one in this respect. I must have cut off literally many hundreds of runners from these 75 plants. I did not intend to allow any young plants to form, but they just would do it; and a few got ahead of me. I may say that I did not regard the non-blooming of the plants the first summer as a disadvantage; on the contrary, I do not allow any of my plants to bear the first season; so I was saved the labor of picking off the blossoms, as I had to do from the other varieties.

I have had a picture of the row of No. 80 taken, and if it turns out well, I will send you a copy. It looks as though berries would be ripe in two or three weeks, and we are eagerly waiting for them.

I should like to have you send me about \$1.00 worth of, say, two or three other of your best varieties; I leave the selection to you, only asking that you do not duplicate the varieties I have. I will remit on receipt.

I hope you will pardon this long letter, but your plants are the wonder of all beholders; and I thought you would like to hear about them. I will report on the fruit later.

Very truly yours,

W. S. Thomas,
State Examiner of Schools,
2337 Eunice St.

New Meadows, Idaho, July 8, 1914.

Mr. Albert F. Etter,
Ettersburg, Cal.

My Dear Sir:

The varieties you can safely recommend for the North are Ettersburg Nos. 80, 84, 89 and Rose Ettersburg. The R. E. is very large with a banana flavor. E. No. 80 is very firm, E. No. 84 is larger and more productive, and E. No. 89 is the most delicious berry I ever tasted.

There were constant rains, hails and snows up to

the first week in June, when the snow crusted on the vines all night. The four Ettersburg varieties and only one of the old varieties came through this test. All the others are knotty and undeveloped, or berries killed in the blossom. You could not have a better test at the Arctic Circle.

Respectfully yours,

Wm. M. Freeman.

Arcata, Cal., Sept. 10, 1913.

Dear Mr. Etter:

Your berries are certainly adapted to this climate. During all the wet weather we had last Spring your Ettersburg No. 121 was not affected in any way, and is the peer as a canning strawberry of the whole strawberry family.

Yours very truly,

W. A. Preston.

Mission City, B. C., May 10, 1916.

Mr. Albert F. Etter,
Ettersburg, California.

Dear Sir:

Many thanks for the prompt way in which you shipped our small order, and the careful way in which you packed the Strawberry Plants.

Our fruit growing friends have never seen the like in such vigorous and strong looking plants.

The three plants you sent with the buds on, are progressing favorably and will bear fruit this year.

Yours very truly,

The King-Beach Manufacturing Co., Ltd.

H. Beach.

Caspar, Mendocino Co., Cal.,
September 14th, 1915.

Mr. Albert F. Etter,
Ettersburg, Cal.

Dear Sir:

I got a dozen Ettersburg No. 80 strawberry plants

with the Rural Press in 1913. From these I grew 175 plants. I set these out on land that originally was very rich, but pretty well run out now. I made no previous preparation of the soil, but just spaded the ground up and put the plants in. The results I got this summer amazed me. I did not think it possible a plant could produce so many berries, and they were all good size, too. Had anyone shown me a photograph showing as many berries as these plants showed, I would have declared it to be a trick photograph. Everyone who saw them was astonished at their productiveness. You may sometime produce a better variety than E. No. 80, but I doubt it. I set the plants in rows three feet apart and two feet between plants, but this seems too close in the row on my soil, so I shall in the future give them two and one-half feet between plants and three between rows. I think I will have to try some of your newer kinds. I am,

Very sincerely,

John F. Murray.

Eugene, Oregon, Sept. 3rd, 1917.

Albert F. Etter,
Ettersburg, Cal.

Dear Sir:

I am glad to tell you that your Ettersburg No. 80 is a great success here. We sold these berries for 50 cents more per crate than any other berries on the Eugene market and they were certainly fine. The very hot weather we had this Summer was very destructive to the strawberry beds here, but the No. 80's stood it fine. I am,

Very truly,

Geo. W. Taylor.

Briceland, Cal., June 18th, 1913.

Mr. Albert F. Etter,
Ettersburg, Cal.

Dear Sir:—

Having this day been shown through your experimental Strawberry ranch, I am pleased to say that I

have been astonished almost beyond belief by what I have seen. I have been growing strawberries for thirty years, with the best plants that I could buy and have visited the best berry growing sections of the United States; but I never saw anything to compare with your berries, in either size, color, productiveness, or flavor. Were I to tell what I saw at your place no one would believe the facts, and I consider that I have learned more today about these berries than I ever knew before. Would advise everyone that possibly can to visit you and see for themselves. And by all means to plant some of these plants.

C. S. Thomas.

The following is from Col. John P. Irish, who was one of the first to grow Ettersburg No. 80:

Casa Rio, March 28th, 1918.

My Dear Mr. Etter:

Writing to my daughter about my garden here on the ranch, I told her that the rows of your Ettersburg No. 80 strawberries in blossom looked like an asphodel meadow. No. 80 is a true cosmopolitan, fitting into all conditions. I have recommended it to many people who have tried it under various and widely different conditions of soil and situation, but everywhere it goes right to work paying ground rent in fruit, and proceeds to pro-create with all the zest of a Mormon bishop or a Prince of Israel. The crowns that will bear abundantly for me this year are five years old.

Yours truly,

Jno. P. Irish.

Prof. C. I. Lewis, for years Horticulturist of the Oregon Agricultural College, and now Organization Manager of the Oregon Growers Co-operative Association, has a personal acquaintance with Ettersburg dating back to 1913. His position and experience should enable him to speak with authority on Ettersburg Strawberries in the Northwest.

Salem, Oregon, Jan. 29, 1920.

Mr. Albert F. Etter,
Ettersburg, Cal.

My Dear Mr. Etter:—

Your recent letter received. The Trebla seems to be the more popular berry up here, at present, than the Ettersburg 121. The Trebla is a very heavy producer under normal conditions. The Ettersburg 121 when it is going right, can not be beat. We have taken off crops ranging from 500 to 1000 crates an acre in our trial plots at O. A. C., but there seems to be a pollination problem. While the blossoms are perfect, they nevertheless do not set well under many conditions here in Western Oregon. The problem is to find the right berry to plant with the Ettersburg 121.

This berry is of good quality, fine size and form for canning, and holds up wonderfully during rainy days. A good superior, and a high class berry in every sense, and I hope we can find a good pollenizer for it.

Sincerely yours,

C. I. Lewis.

Ventura, Cal., February 5th, 1918.

Mr. Albert F. Etter,
Ettersburg, Cal.

Dear Sir:—Enclosed find my check for \$2.00 for which please send me some "Trebla" and "Delecto" strawberry plants.

Several years ago, through the "Press," I obtained some No. 80 plants. For the first two years I had no success with them but as soon as I found the cultural method required for this particular climate they have proven to be the "only strawberry" for me.

If the Trebla and Delecto are found adapted to this climate and are an improvement over the old No. 80 I certainly want them. I am,

Yours very truly,

J. W. Bean.

Santa Barbara, Cal., Feb. 11, 1920.

Mr. Albert F. Etter,
Ettersburg, Calif.

Dear Sir:—

Inclosed please find check for Three Dollars (\$3.00) in payment of the strawberry plants which you sent me. These plants arrived in first class condition and I consider them some of the finest that I have seen.

Thanking you for the promptness and care given my order, I am,

Very truly yours,

Eugene S. Kellogg.

In Australia and New Zealand the Ettersburg Strawberries have made an interesting showing. Clippings from a newspaper of Adderton Road, Dundas, New South Wales, by Herbert J. Rumsey, tell of their progress at the Antipodes. It is only fair to me to say that the "Tree" part of the story is distinctly a New Zealand creation, and owes nothing to me. The "Ettersburgh" is also a New Zealand creation. "Ettersburg" is the name as I gave it, and in all reason is the one that should always be used.



ETTERSBURGH THE BOOMED

Mr. Rumsey's Notes of Variety Trials

The Ettersburgh (Tree Strawberry)

So much has been written about this variety that it is the first about which inquiries are made. The name covers two, if not three, hybrids made in California by Mr. Etter, with the view of getting the size and hardiness of the Clilian or Beach strawberry, with the quality; and Mr. Etter appears to have met with considerable success. I have about 100 plants of these on trial, and have had a fair opportunity for observation.

I am now fully satisfied that the name "tree strawberry" should never have been used, as the plant is in no sense a tree, but grows in the usual bush form, and in-

creases by runners as do the ordinary sorts. There is one type, which was introduced through New Zealand, that appears to be more inclined to stool out early, but it holds back its fruiting until later. It appears to be likely to make a very big bush, and to increase very fast. My plants have had few fruits yet, but these are more wedge or heart shaped than the others, and the plants are already sending out runners in all directions. The other type, brought direct from California has come into bearing much more quickly, but is making a slower growth of plant. The berries of this variety are almost as round as a cherry, and are a rich red right through to the core. They are staminate or perfect flowering, and they pollenise very freely, every fruit being perfectly shaped.

The flavor of Ettersburg has been variously described. A Californian friend of the writer told him that it was an acquired taste; someone else said that it was more like a cherry than a strawberry; a careful study of the flavor in comparison with other varieties places it in my mind far above Cresswell's Seedling, but hardly as fine as Phenomenal or Dr. Moree.

Where Ettersburgh will take its place will be as a market berry. If picked when fully grown it will complete its coloring after being packed; it colors well all over, without any white patches. It is distinctly more firm than the usual type of strawberry, and carries well when packed. The firmness is notable while eating. It is not, of course, like eating a hard core, but one gets a more substantial bite and something not quite so evanescent as the ordinary strawberry. It is delicious with cream.

Ettersburg, I think, will tend to make strawberry jam more popular, as it will not only carry better to the factory, but the jam is, to my mind, a great improvement on that made from berries of the Cresswell type. Ettersburg remains whole after cooking, and is free from the syrupy sweetness that makes strawberry jam objectionable to many; the reason probably is that being firmer it does not boil away so much before jellifying.

The only thing about Ettersburg that has so far disappointed me is the size of the berries, but as my plants are young, and the variety is a slow grower, it will, perhaps, not come to its true form until the second year.

Ettersburg does not seem to be immune to the strawberry-leaf blight, but this is easily kept under by spraying with sulphate of iron or Bordeaux mixture once or twice between the fruiting seasons.

What promises to become the most popular and profitable strawberry in New Zealand has been placed for the first time on the southern market, where it scored a great success. This is the Ettersburg strawberry, grown at Island Block, Central Otago. The Ettersburg is a recent importation from the United States. It is a hardy, vigorous plant, frost-resisting, and thrives in practically any soil. It grows to a height of 2 feet and as much as 3 pounds of berries has been taken from one plant. The berries themselves are flesh-red to the core, of first-class dessert quality, of distinctive flavor and nice size. When offered on the open market these strawberries brought 6d. per bottle in advance of market prices.

The plants are now obtainable in limited numbers in Australia, and will soon become popular if they do as well as they have done in New Zealand.

Mr. Rumsey comments: Mr. Prescott's experience accords with mine regarding Ettersburg No. 80. The only "Etter" that gives berries of a satisfactory size in the first year is No. 89. Those that have tried Ettersburgs will agree however, that the berries of the new group are distinctive in flavor and otherwise, and will prove very acceptable additions to our strawberry varieties.

The following is from the Agricultural Experiment Station Bulletin No. 401, of Geneva, N. Y.:

Ettersburg No. 80—(Albert Etter, Briceland, Cal.) Originated by Mr. Etter in 1905 and introduced by him in 1913. Mr. Etter makes the following statement in regard to its parentage: 'A seedling Sharpless X Parry of the third generation was crossed with the Peruvian beach or sand strawberry, producing Rose Ettersburg.' Rose Ettersburg was crossed with Californica, our native wood strawberry, producing No. 3. No. 3 was crossed being *Ettersburg No. 80*."

Plants very numerous, vigorous, productive, considerably injured by leaf spot; leaves medium to large,

thick, rugose; flowers perfect, season of bloom late, one and one-eighth inches across; petals roundish, five to six in number; stamens numerous; receptacle large; fruit-stems long, thick, erect; calyx large, at or depressed, leafy, attractive green; seeds raised. Fruit matures late; large, roundish-conic to blunt-wedge, attractive to medium red; apex very obtuse; flesh whitish toward center, very juicy, firm, sweet, pleasant flavored; good in quality.

Plants should be given sufficient room as the runners multiply rapidly. Leaves attractive dark green; blossoms large, with abundant pollen. Fruit of good size which is well-maintained until the close of the season, attractive both in color and shape. Worthy of test on account of many desirable characters of both plant and fruit although the foliage may sometimes be injured by disease and under certain conditions the light center of the berries may be undesirable.

Ettersburg No. 84—(Albert Etter, Briceland, Cal.) Originated by Mr. Etter and introduced by him in 1913. Parentage the same as *Ettersburg No. 80*.

Plants very numerous, large, vigorous, productive, with but slight trace of leaf spot, leaves medium to large, dark green; flowers perfect, season of bloom late; one and one-fourth inches across, petals nearly round; stamens numerous; receptacle large, somewhat prominent; fruit-stems long, thick, erect; calyx large, at or raised, leafy, attractive green; seeds slightly raised. Fruit matures late; large-blunt-wedge to conic, often slightly necked, glossy, attractive, medium to dark red; apex obtuse; flesh well colored to center, very juicy, firm, sweet, pleasant flavored; good in quality.

The plants should not be crowded in setting as they multiply rapidly making a wide, matted row. A perfect-flavored, late-blooming variety, especially desirable in localities subject to late spring frosts. Fruit distinctly late and with characteristic dark green leafy calyx. Equal to the best commercial varieties. Worthy of more extended trial.

Ettersburg No. 89—(Albert Etter, Briceland, Cal.) Originated by Mr. Etter in 1905 and introduced by him in 1913. A hybrid Dornan X Cape Mendocino beach strawberry

Plants very numerous, large, vigorous, productive, considerably injured by leaf spot; leaves large, dark green, slightly rugose; flowers perfect, season of bloom late, one and one-sixteenth inches across; petals nearly round, five to eight in number; stamens numerous; calyx flat or depressed, variable in color; seeds raised. Fruit well colored to center, juicy, firm, sweet, mild, pleasant flavored; good in quality.

Plant-habits good except the foliage appears subject to attacks of disease; plants should not be set closely. A perfect flowering, late-blooming variety characterized by its dark green foliage and by its numerous large, showy blossoms; general appearance somewhat similar to Ettersburg No. 80. Appears valuable as a productive, late-fruited variety; ships unusually well. Worthy of more extended trial.

Ettersburg No. 112—(Albert Etter, Briceland, Cal.) Originated by Mr. Etter in 1905 and introduced by him in 1913. Parentage the same as Ettersburg No. 80.

Plants numerous, below medium in size, medium to unproductive; leaves dark green, rugose; flowers perfect, season of bloom very late, one inch across; petals nearly round, five to six in number; stamens numerous; fruit-stems thick, erect; calyx raised; seeds sunken. Fruit matures very late; large to above medium, conic to slightly wedge, necked, glossy, attractive light to medium red, colors unevenly; apex slightly pointed; flesh whitish toward center, juicy, sweet, pleasant flavored; good to very good.

A low-growing variety with dark green foliage; the latest to bloom of all varieties tested in 1914, hence may have value in locations subject to late spring frosts; although berries are somewhat variable in color and light at the center—the variety is worthy of test for a very late ripening kind on account of its high quality.

From David Seabury, artist, traveler and instructor, who spent ten years studying art in Europe, now a resident of Ettersburg:

Ettersburg, Cal., October 1st, 1920.

The man who has eaten oranges in Sunny Italy, grapes on the dreamy French Riveira, apples in cider-scented Normandy, bananas fresh from their palmy green,

strawberries from the moist market-gardens of England, and great sweet blackberries from the fields of his native New England—is about the hardest man on this green globe to convince of anything new—superior and altogether wonderful in the line of fruits.

And so I—for one—who have had my surfeit of all these privileges said bunk” to myself when I heard of picking “a quart of surpassingly sweet strawberries as sweet as the wild ones of Maine or the crisp, red ones that creep out below the snow line in Switzerland.

I said “bunk” to myself until I tasted the berries and with my own hands picked a “quart at a time” from one plant—not once but many, many times. I said “bunk” until I saw the ordinary strawberries freeze their blossoms in the frosts of spring and then wither in the drought of summer, I had to admit that Etter has certainly DONE it—and more.

David Seabury.

Hood River, Oregon, Oct. 11, 1920 .

Mr. Albert F. Etter,
Ettersburg, Cal.

Dear Sir:

As requested, I am sending you a report on the plants you sent us last year.

Beadarena: Started to bear June 24. July first in heavy bearing. Medium size of fruit and fair uniformity. At end of fruiting season fruit ran very small. Flesh whitish, firm, meaty, juicy, quality good. When fully ripe is dark red and glossy and attractive. Plant, large and vigorous.

Trebla: Plant very large and vigorous, fruit stems numerous, season opened July first. Fruit well held up by foliage. Heavy bearer. Good for canning.

Fantastic: May 24, heavy bloom. Plant large and vigorous. Many runners. Yields heavy. Seeds, numerous and depressed. Fruit of medium size and fairly uniform. Flesh, whitish in center, fairly firm, fairly juicy, fine grain but somewhat tough. Quality poor. Shape makes this berry unsuitable for commercial purposes, such as required at Hood River.

Eurisko: Heavy bloom June 3. Plant large and vigorous, very healthy. July first season opens. Seeds, raised and numerous; heavy bearer.

Ettersburg 80: Plant very large and vigorous. Heavy bloom June 3. Heavy bearer.

Ettersburg No. 89: Heavy bloom from May 22 to June 3. Plant large and vigorous. Season, July first and later. Flesh, medium dark red when ripe, sweet flavor, medium firm, juicy. Quality good.

Ettersburg 121: June 3, heavy bloom. Plant very large and vigorous. Heavy bearer. Fruit small but uniform. Flesh, light red. Fruit, light red to medium dark red when ripe. Unattractive.

This has been a season during which I have been very busy and have not given the plants as close a checking up as I would have liked. Next year I hope to give the matter more attention. These plants were set on a medium clay loam rich in organic matter.

Please let me have a copy of your new catalogue when out. I am anxious to try any other varieties as you have them listed.

Very truly yours,

Gordon G. Brown.

Horticulturist.



Wizzard Ranche

Fortuna, Cal., Nov. 15th, 1920.

Mr. Albert F. Etter,
Ettersburg, Cal.

Regarding my experience with your strawberries, I will report as follows: Red Cross is a mighty fine berry for table use—good flavor and good color, and I believe it will make a dandy for the trade at home.

“Cream” strawberry is very sweet. I have never seen one decay yet from contact with the ground. It must have lots of sugar in it. It being not a red berry fools the birds, but I think we would have to educate the public before they would take to them, too. Personally, I am stuck on it.

The best all-around berry I ever tried is your Trebla—it’s a “humdiger.” I started to pick them in April, and I am still picking them at this date. As a strawberry for these parts I doubt if it can be beat. I am,

Very sincerely,

Frank C. Page.



ABOUT TRADE MARK LABELS

Since I have been to a lot of time, and expense as well, in producing all the various varieties of strawberries I am offering the public, I feel I am more entitled to trade in these particular varieties of plants than the person who has done nothing to create them. In the first place the variety belonged solely to me before it had a name. Secondly, if I coin a word, it belongs to me and I can use such a coined word as a trade mark on certain plants of varietal peculiarities if I desire to do so. The Trade Mark laws of the State of California allow me to do this, and register them in my name, giving me absolute title to the registered coined word to use as a label on that certain class of goods I propose to use it on in my application. If afterward, those certain plants of varietal characteristics, the plants of which have been previously sold under my trade mark label, become known and designated by name identical with my trade mark label, it cannot invalidate my vested right in said trade mark, nor can a similar name intended to deceive or likely to deceive be used as a label on any plants offered for sale. For the law says that if you offer a thing for sale under a name that infringes on a trade mark, it is held for granted against you that you would complete the infringement by making the sale if you had the chance.

Sections 655 and 991 of the Civil Code of the State of California grants us the right to establish these trade marks, and Sections 350 and 351 make it a misdemeanor to violate these vested rights in trade marks. This all summed up means that if any person attempts to sell, or does sell any nursery stock in the State of California under my Trade Mark Labels lays himself liable to prosecution. The registration of trade marks in California does not give any protection to the owner of said trade mark outside and beyond the bounds of the State. If you would care to know the Trade Mark laws of California more thoroughly, get the circular on the same from the Secretary of State, Sacramento, Cal.

There are twenty-two different classes of commodities on which Trade Marks are issued. My Trade marks

are for labels on nursery stock—seeds, plants, trees, cuttings, scions, etc. Fresh fruit is in another class, and canned or manufactured fruit in still another class. Therefore, one can use my Trade Mark names on both fruit and cans and in no way violate my trade mark, because it does not extend to these classes.



PRICE LIST FOR 1920-21

Variety	Available Stock	Price		
		25	100	1,000
Rose Ettersburg	6,000	\$1.00	\$3.00	\$15.00
Ettersburg No. 80	50,000	1.00	2.50	15.00
Ettersburg No. 84	4,000	1.00	3.00	15.00
Ettersburg No. 89	10,000	1.00	3.00	15.00
Ettersburg No. 121	20,000	1.00	2.50	15.00
Nor-j	12,000	1.00	3.00	15.00
Trebla	40,000	1.00	3.00	15.00
Cream	5,000	1.00	3.00	15.00
White Sugar	5,000	1.00	3.00	15.00
Luge	10,000	1.00	3.00	15.00
Fendalcino	25,000	1.00	3.00	15.00
Fantastic	3,000	1.00	3.00	15.00
Ossie	8,000	1.00	3.00	15.00
Kalacene	No plants available till 1922.			
Eurisko	2,000	1.00	3.00	15.00
Ettersburg No. 450	2,000	1.00	3.00	
Red Cross	250,000	1.00	2.50	15.00
Delecto	4,000	1.00	3.00	15.00

Above prices include delivery by mail on 25 and 100 lots anywhere west of the Rocky Mountains; 50 cents for 100 extra for shipments east of the Rocky Mountains. Prices quoted on 1,000 lots are delivered free, in the 1st, 2nd and 3rd zones, and outside 50 cents per zone per 1,000 will be charged in addition.

After the 15th of April the price on plants in 1,000 lots will be increased 20 per cent unless booked for later delivery. This is just because of the greater weight and extra care in preparing and packing necessary to insure satisfactory results.

An order for 100 plants may be made up of one to four varieties in lots of 25. That is, I prefer not to

break bunches, but if the customer wants less than 25 of a variety in 100 lots, I will bend to it in perfect good nature. But please don't order less than 25 plants because an order for less than \$1.00 is hardly worth fooling with with all the red tape one has to go through.

Two hundred of a variety will be sold for \$5.00, and 500 of a variety for \$10.00. If you want a large order, or plants grown by contract, write for prices.

Above all else, don't "fly off the handle" if it rains so I can't dig plants and your order is delayed. We get more rain than we really need here, but I can't stop it. At all times I am willing to work hard to serve your best interests. If your order can't be filled at once, you will be notified by card telling the approximate date of shipment.

TREBLA COLUMBINE or AQUILEGIA

This new hybrid columbine is the result of crossing several species, producing ever so many new forms and colors never before seen in this graceful flower. They come in all shades of scarlet, purple and blue and in both singles and doubles.

Seed is limited—50c per packet while the supply lasts.

MONANTHOS VETCH or LENTIL

This valuable plant imported from Europe by the Office of Foreign Seed and Plant Introduction of the U. S. Department of Agriculture has been grown at Ettersburg since 1905. I regard it as an extremely valuable plant for the Pacific Coast.

It is a great nitrogen gatherer to enrich the soil, and among the most nutritious of all forage for cattle, sheep and goats. As a milk producer it is a wonderful forage for cows and goats. A very remarkable thing about it is that it is efficient in producing milk, either green or dried. When cut in season for hay it is best

of course, but even after it has ripened and the seed threshed, it is palatable and nutritious—proven so by the flow of milk we get.

It is not suitable for horses because it is too laxative, and they are not fond of it. Horses do not like the seeds of it either, but cows and goats are fond of the seeds when ground into meal. Chickens will eat the seeds sparingly raw, and quite well if cooked. Hogs will have none of them in theirs in raw meal even if served with milk.

As a mixture in wheat flour they are very desirable. As an ingredient for soups they are about the equal of the ordinary lentil, and if properly prepared make a very palatable and most nutritious soup.

With us here, after 15 years' experience with them on the table, as a stock feed and as a soil enricher, it would seem as hard to dispense with the *Monanthos* Lentil as it would be to dispense with the potato.

They are best sown in the fall, especially the first crops of them on a soil that is not inoculated. With us here, the greatest obstacle is in getting a new piece of ground inoculated. Once inoculated, they thrive like weeds. Sowing inoculated soil on a new field has proven effective with us.

This *Monanthos* vetch or lentil is in growth similar to the ordinary vetch tho more slender, and also more tender. Since they are more tender, they are superior to the common vetch for plowing under because they rot down more readily. Judging by the way the grain grows where these vetch have grown, leaves no doubt that they are a great soil builder.

Here we always sow with grain, about 25 lbs. of vetch and as much grain per acre. If sown alone, they are apt to rot on the ground in wet weather. The seed does not readily shatter in this climate, especially on fall sown stock.

I can furnish seed at the following prices: 1 lb., 25c; 3 lbs. 50c, post-paid; 10 lbs and upward, 10c per lb. and postage additional.

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